against a low-lying plain, is favourable to the harnessing of a great reserve of water-power, draining from the everlasting snows and glaciers of the Tienshan and convertible into electricity.

Propagandists are apt to confuse figures of capacity of power stations (in kilowatts) with those of output (in kilowatt hours *per annum*), and there is a notable inclination to brandish the latter with the object presumably of impressing the reader with astronomical cyphers. It is easier to stick to capacity figures.

A useful yardstick in estimating hydro-electric development in Turkistan is available in the Ardnacrusha Station on the Shannon in Ireland. The capacity of this station, working with one turbine in reserve, is a little under 100,000 kilowatts on a fall of 28½ metres with a maximum volume discharge of 250 cubic metres a second. Although of course the Shannon is a very small stream in comparison with the great rivers of Turkistan, the Shannon hydro-electric station has several points of interest to the student of Central Asia. Central Ireland is a flat country, and it is not easy to secure sufficient fall for the efficient generation of hydro-electric power. The lack of fall must be made up by a greater volume, and that is not available on the small rivers of these islands. The result has been that the Shannon Station has by no means fulfilled the hopes of its German designers. It does not supply all Ireland with electric power, and it has been necessary to develop an additional station in Dublin, deriving power from steam, not water, with a capacity of 118,000 kilowatts to carry the present loads. In other words water-power in Ireland does not carry even half the load.

If we neglect Davidov's figures and turn to a recent forecast of capacity to be reached by the stations in Soviet Central Asia at the end of the fourth Five-Year Plan, we find an aggregate figure of 1,000,000 kilowatts or about ten times the capacity of the Irish station. The largest stations now working are at Farkhad at the approaches to the Hungry Steppe (Mirza Chöl) on the Sir Darya, where a 1148 foot-long dam

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has been erected and the longest derivation canal in the Union has been excavated. Work was begun in 1943, and the station is supposed to have started to operate in 1948. The capacity is stated to be 200,000 kilowatts. The next largest is on the Chirchik and Boz-Sir, near Tashkent, where there is a series of linked stations, six of them finished in 1945 and four more in 1947. Others are planned. The capacity stated is 150,000 kilowatts. There is also planning for the construction of a series of generating stations on canal falls on the Upper Oxus–Zarafshan project, to reach an aggregate capacity of 1,000,000 kilowatts, and for three similar stations of an aggregate capacity of 100,000 kilowatts, also on canal falls on the great project for a Turkmenian Canal along the old Amu-Darya bed of the Özboy. There are, moreover, numerous small power stations, listed in hundreds, on mountain torrents and streams, and also on canal falls in Farghana and elsewhere in the piedmontane area. The largest recently mentioned seem to be in Tajikistan on the Varzob and Vakhsh rivers, 13,000 and 10,000 kilowatts respectively.

The impression derived is that the Soviet engineers have two techniques: the first for the establishment of large stations at canal headworks or on canal falls, and the second for the dispersal of large numbers of small local plants on mountain torrents.

Now, on a general view, the terrain of Turkistan should be admirably suited for the harnessing of water-power in the east where the mountains merge into the plains. But it is unlikely to be so favourable well out in the plains, where the declivity is very small in the direction of the Caspian and Aral Seas. Canal falls do not normally provide good sites for large stations, the fall being insufficient except in favourable circumstances. The plains of Turkistan are flatter than central Ireland. It may be that the great volume of the Turkistan rivers will make up for any insufficient fall. The discharge of the Oxus in flood may be anything up to 10,000 cubic metres a second, but water for a generating plant must be canalized in a derivation channel. Some scepticism is